

Application Serial No.: 10/072,345
Attorney Docket No.: 0190142

REMARKS

Claims 1-20 are pending in the present application. By the present amendment, claims 1, 5, 8, 14, 15 and 20 have been amended to overcome the Examiner's objections. Reconsideration and allowance of outstanding claims 1-20 in view of the above amendments and the following remarks are respectfully requested.

A. Rejection of Claims 1-3, 7-10, 12, 14-16, 18 and 20 under 35 USC

§102(b)

The Examiner has rejected claims 1-3, 7-10, 12, 14-16, 18 and 20 under 35 USC §102(b), as being anticipated by Harada et al. (USPN 6,108,036) (hereinafter, "Harada"). For the reasons discussed below, Applicant respectfully submits that the present invention, as defined by amended independent claims 1, 8 and 15, is patentably distinguishable over the cited reference.

Claim 1 of the present application increases the resolution by capturing two or more images within the imaging array, where each image is captured in a successive time interval corresponding to an image capture and storage rate of the imaging array, and by combining the correlated pixels of the two or more selected images into a single enhanced image. However, as described in the present application, the pixels associated with each image can be relatively shifted, in various directions and distances, due to possible movement of the imaging array during the time between capture of images. See, for example, the present application, page 7, lines 26-27 and Figure 4.

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In contrast to conventional methods and to overcome the relative shift of the pixels from one image to another, claim 1 of the present application correlates pixels of at least one of the two or more images by shifting to locate corresponding pixels of the other images. See, for example, page 10, lines 4-8. Independent claim 1 has been amended to further clarify this aspect of the invention and now recites "correlating pixels of at least one of the two or more images by shifting to locate corresponding pixels of the other images."

In contrast to claim 1 of the present application, the disclosure in Harada requires "predetermined shifting positions." As described in Harada, pixels are moved relative to a predetermined reference position in the direction of light-receiving regions of the imaging device. See Harada, column 10, lines 6-10. In contrast, claim 1 of the present application recites "correlating pixels of at least one of the two or more images by shifting to locate corresponding pixels of the other images." As such, the present invention is patentably distinguishable over Harada.

Independent claims 8 and 15 of the present invention have also been similarly amended to include the aforementioned limitations of independent claim 1. Accordingly, independent claims 8 and 15 are also patentably distinguishable over the disclosure in Harada.

For the foregoing reasons, Applicant respectfully submits that the present invention as defined by independent claims 1, 8 and 15 is not taught, disclosed, or suggested by the art of record. Thus, independent claims 1, 8 and 15 are patentably

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distinguishable over the art of record. As such, the claims depending from independent claims 1, 8 and 15 are, *a fortiori*, also patentable for at least the reasons presented above and also for additional limitations contained in each dependent claim.

B. Amended Claims 5, 14 and 20

Applicant has amended dependent claim 5 to recite that the “correlating includes multiplying values of shifted pixels and pixels of the other images to generate a plurality of products, generating a squared sum of the plurality of products, and obtaining the highest squared sum of the plurality of products.” Further, claims 14, and 20 have been amended to include similar limitations. Applicant respectfully submits that the aforementioned limitations find support in the specification, for example, on page 10, lines 9-13.

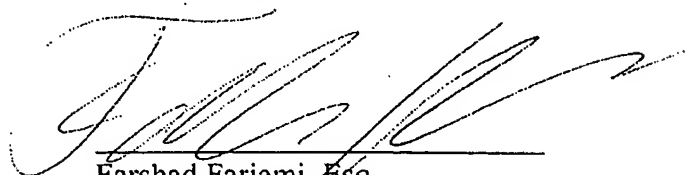
Further, Applicant respectfully submits that claims 5, 14 and 20 are patentable over Harada, not only because Harada does not use a correlation technique to locate corresponding pixels of the images, but also because Harada fails to disclose, teach or remotely suggest “correlating includes multiplying values of shifted pixels and pixels of the other images to generate a plurality of products, generating a squared sum of the plurality of products, and obtaining the highest squared sum of the plurality of products.”

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C. Conclusion

Based on the foregoing reasons, an early Notice of Allowance directed to all claims 1-20 pending in the present application is respectfully requested.

Respectfully Submitted,
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